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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/397,920	09/17/1999	HIDEYUKI SAKAIDA	1982-0136P	9398

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EXAMINER

COUSO, YON JUNG

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 04/11/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/397,920

Applicant(s)

SAKAIDA, HIDEYUKI

Examiner

Yon Couso

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.
2. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It appears that the claim 21 should be depend from claim 5 instead of claim 1. There is mention of interpolation calculation in claim 1 however, it would not make much sense to further define "a first type of interpolation performs high-speed conversion and a second type of interpolation, which is performed subsequent to the first type, is for preserving image quality" without the intermediate claim 5.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 11, 12, 14, 16, 18, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirabayashi et al.

Hirabayashi teaches an image conversion method in which image data represented by a required number of pixels is obtained from original image data represented by a predetermined number of pixels, comprising the steps of: carrying out image conversion by obtaining, by interpolation calculation, image data represented by a number of pixels which is one-half of the predetermined number of pixels, from the original image data represented by the predetermined number of pixels (figure 7c);

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preparing an intermediate image by repeatedly carrying out image conversion at a rate of one-half of the number of pixels, until a number of pixels close to the required number is reached (figure 7d); and carrying out image conversion by obtaining, from the intermediate image, image data represented by the required number of pixels (406 in figure 6 and column 5, lines 51-54).

Hirabayashi teaches wherein interpolation calculation, which is carried out when the image conversion for preparing the intermediate image is effected, is different from interpolation calculation, which is carried out when the image conversion for obtaining the image data represented by the required number of pixels from the intermediate image is effected (column 5, line 65-column 6, line 48).

Hirabayashi teaches wherein the intermediate image has a number of pixels which is greater than and closest to the required number of pixels (figure 7c).

Hirabayashi teaches wherein the intermediate image is prepared by dividing the original image data into partial images and repeatedly carrying out the image conversion to one-half of the number of pixels for each of the partial images (802, 803 and 804 in figure 3).

Hirabayashi teaches an image conversion method in which image data represented by a required number of pixels is obtained from original image data represented by a predetermined number of pixels by repeatedly carrying out interpolation calculation at a rate of one-half of the number of pixels, wherein image data represented by the required number of pixels is obtained by carrying out interpolation calculation at a rate of x (wherein $1 > x > 1/2$) of a number of pixels at one of

a beginning step, an intermediate step, and a final step of image conversion (figure 6 and column 45-column 34).

Hirabayashi teaches image conversion to further make the intermediate image into the set number of pixels performs conversion at a rate of x (wherein $1 > x > 1/2$) (figure 6 and column 45-column 34).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi et al.

The arguments advanced in paragraph 3 above as to the applicability of the reference are incorporated herein.

Even though Hirabayashi does not teach details on the interpolation calculation being carried out by using at least two types of interpolation calculation methods, there are many well-known interpolation techniques used in the art that it would have been obvious to one of ordinary skill in the art given the reference at the time the invention was made, to adapt any old and well-known interpolation techniques and combination of techniques (at least two types of interpolation calculation methods) to compute images shown in the figures 7c and 7d in the Hirabayashi reference.

5. Claims 7-10, 13, 15, 17 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Delean.

Delean teaches an image conversion method in which image data represented by a required number of pixels is obtained from original image data represented by a predetermined number of pixels, comprising the steps of: obtaining by interpolation calculation, from the original image data represented by the predetermined number of pixels, image data represented by a number of pixels of $1/N$ (wherein N is an integer of 2 or more) or greater, by using an N -size filter used to obtain an interpolation point from N pixels, thereby allowing image conversion and obtaining image data represented by the required number of pixels by carrying out the interpolation calculation plural times (figure 5 and column 8, lines 26-60).

Delean teaches the required number of pixels is $1/N$ (wherein N is an integer of 2 or more) or less (figure 5).

Delean teaches wherein the interpolation calculations carried out plural times are effected in order from that of the lowest conversion rate (figure 5).

Delean teaches that the interpolation calculation is carried out by using at least two types of interpolation calculation methods (column 8, lines 32-37).

6. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (703) 305-4779. The examiner can normally be reached on 8:00 am –4:30 pm from Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


YON J. COUSO
PRIMARY EXAMINER

Yjc

April 10, 2003